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Reviewer: Keisha Douglas

Timestamp: [year=2008; month=9; day=10; hr=15; min=10; sec=15; ms=998;]

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Application No: 10598682 Version No: 1.0

Input Set:

Output Set:

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Finished: 2008-08-11 11:17:26.881
Elapsed: 0 hr(s) 0 min(s) 2 sec(s) 275 ms
Total Warnings: 22
Total Errors: 0
No. of SeqIDs Defined: 57
Actual SeqID Count: 57

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Actual SeqID Count: 57

Error code	Error Description
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SEQUENCE LISTING

<110> REGENTS OF THE UNIVERSITY OF CALIFORNIA

<120> COMPOSITIONS AND METHODS FOR GROWTH OF EMBRYONIC STEM
CELLS

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<140> 10598682

<141> 2008-08-11

<150> PCT/US05/007704

<151> 2005-03-09

<150> 60/552,318

<151> 2004-03-10

<160> 57

<170> PatentIn Ver. 3.3

<210> 1

<211> 116

<212> PRT

<213> Homo sapiens

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Ser Gly Tyr His Ala Asn Tyr Cys Glu Gly Glu Cys Pro Ser His Ile
35 40 45

Ala Gly Thr Ser Gly Ser Ser Leu Ser Phe His Ser Thr Val Ile Asn
50 55 60

His Tyr Arg Met Arg Gly His Ser Pro Phe Ala Asn Leu Lys Ser Cys
65 70 75 80

Cys Val Pro Thr Lys Leu Arg Pro Met Ser Met Leu Tyr Tyr Asp Asp
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Gly Gln Asn Ile Ile Lys Lys Asp Ile Gln Asn Met Ile Val Glu Glu
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Cys Gly Cys Ser
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gagggtgagt gcccggcca tatagcaggc acgtccgggt cctcaactgtc cttccactca 180
acagtcatca accactaccg catgcggggc catagccctt tgccaaacct caaatcgtgc 240
tgtgtgccc ccaagctgag acccatgtcc atgttgtact atgatgatgg tcaaaaacatc 300
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<211> 426

<212> PRT

<213> Homo sapiens

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20 25 30

Pro Asp Cys Pro Ser Cys Ala Leu Ala Ala Leu Pro Lys Asp Val Pro
35 40 45

Asn Ser Gln Pro Glu Met Val Glu Ala Val Lys Lys His Ile Leu Asn
50 55 60

Met Leu His Leu Lys Lys Arg Pro Asp Val Thr Gln Pro Val Pro Lys
65 70 75 80

Ala Ala Leu Leu Asn Ala Ile Arg Lys Leu His Val Gly Lys Val Gly
85 90 95

Glu Asn Gly Tyr Val Glu Ile Glu Asp Asp Ile Gly Arg Arg Ala Glu
100 105 110

Met Asn Glu Leu Met Glu Gln Thr Ser Glu Ile Ile Thr Phe Ala Glu
115 120 125

Ser Gly Thr Ala Arg Lys Thr Leu His Phe Glu Ile Ser Lys Glu Gly
130 135 140

Ser Asp Leu Ser Val Val Glu Arg Ala Glu Val Trp Leu Phe Leu Lys
145 150 155 160

Val Pro Lys Ala Asn Arg Thr Arg Thr Lys Val Thr Ile Arg Leu Phe
165 170 175

Gln Gln Gln Lys His Pro Gln Gly Ser Leu Asp Thr Gly Glu Ala
180 185 190

Glu Glu Val Gly Leu Lys Gly Glu Arg Ser Glu Leu Leu Ser Glu
195 200 205

Lys Val Val Asp Ala Arg Lys Ser Thr Trp His Val Phe Pro Val Ser
210 215 220

Ser Ser Ile Gln Arg Leu Leu Asp Gln Gly Lys Ser Ser Leu Asp Val
225 230 235 240

Arg Ile Ala Cys Glu Gln Cys Glu Ser Gly Ala Ser Leu Val Leu
245 250 255

Leu Gly Lys Lys Lys Lys Glu Glu Glu Gly Glu Lys Lys Lys
260 265 270

Gly Gly Glu Gly Ala Gly Ala Asp Glu Glu Lys Glu Gln Ser
275 280 285

His Arg Pro Phe Leu Met Leu Gln Ala Arg Gln Ser Glu Asp His Pro
290 295 300

His Arg Arg Arg Arg Gly Leu Glu Cys Asp Gly Lys Val Asn Ile
305 310 315 320

Cys Cys Lys Lys Gln Phe Phe Val Ser Phe Lys Asp Ile Gly Trp Asn
325 330 335

Asp Trp Ile Ile Ala Pro Ser Gly Tyr His Ala Asn Tyr Cys Glu Gly
340 345 350

Glu Cys Pro Ser His Ile Ala Gly Thr Ser Gly Ser Ser Leu Ser Phe
355 360 365

His Ser Thr Val Ile Asn His Tyr Arg Met Arg Gly His Ser Pro Phe
370 375 380

Ala Asn Leu Lys Ser Cys Cys Val Pro Thr Lys Leu Arg Pro Met Ser
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Asn Met Ile Val Glu Glu Cys Gly Cys Ser
420 425

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<212> PRT
<213> Homo sapiens

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20 25 30

Ser Phe Lys Asp Ile Gly Trp Asn Asp Trp Ile Ile Ala Pro Ser Gly
35 40 45

Tyr His Ala Asn Tyr Cys Glu Gly Glu Cys Pro Ser His Ile Ala Gly

50	55	60
Thr Ser Gly Ser Ser Leu Ser Phe His Ser Thr Val Ile Asn His Tyr		
65	70	75
Arg Met Arg Gly His Ser Pro Phe Ala Asn Leu Lys Ser Cys Cys Val		
85	90	95
Pro Thr Lys Leu Arg Pro Met Ser Met Leu Tyr Tyr Asp Asp Gly Gln		
100	105	110
Asn Ile Ile Lys Lys Asp Ile Gln Asn Met Ile Val Glu Glu Cys Gly		
115	120	125
Cys Ser		
130		

<210> 5
<211> 115
<212> PRT
<213> Homo sapiens

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15		

Phe Val Ser Phe Lys Asp Ile Gly Trp Asn Asp Trp Ile Ile Ala Pro		
20	25	30

Ser Gly Tyr His Ala Asn Tyr Cys Glu Gly Glu Cys Pro Ser His Ile		
35	40	45

Ala Gly Thr Ser Gly Ser Ser Leu Ser Phe His Ser Thr Val Ile Asn		
50	55	60

His Tyr Ala Cys Gly His Ser Pro Phe Ala Asn Leu Lys Ser Cys Cys		
65	70	75
80		

Val Pro Thr Lys Leu Arg Pro Met Ser Met Leu Tyr Tyr Asp Asp Gly		
85	90	95

Gln Asn Ile Ile Lys Lys Asp Ile Gln Asn Met Ile Val Glu Glu Cys		
100	105	110

Gly Cys Ser
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<210> 6
<211> 426
<212> PRT
<213> Homo sapiens

<400> 6

Met Pro Leu Leu Trp Leu Arg Gly Phe Leu Leu Ala Ser Cys Trp Ile		
1	5	10
15		

Ile Val Arg Ser Ser Pro Thr Pro Gly Ser Glu Gly His Ser Ala Ala
20 25 30

Pro Asp Cys Pro Ser Cys Ala Leu Ala Ala Leu Pro Lys Asp Val Pro
35 40 45

Asn Ser Gln Pro Glu Met Val Glu Ala Val Lys Lys His Ile Leu Asn
50 55 60

Met Leu His Leu Lys Lys Arg Pro Asp Val Thr Gln Pro Val Pro Lys
65 70 75 80

Ala Ala Leu Leu Asn Ala Ile Arg Lys Leu His Val Gly Lys Val Gly
85 90 95

Glu Asn Gly Tyr Val Glu Ile Glu Asp Asp Ile Gly Arg Arg Ala Glu
100 105 110

Met Asn Glu Leu Met Glu Gln Thr Ser Glu Ile Ile Thr Phe Ala Glu
115 120 125

Ser Gly Thr Ala Arg Lys Thr Leu His Phe Glu Ile Ser Lys Glu Gly
130 135 140

Ser Asp Leu Ser Val Val Glu Arg Ala Glu Val Trp Leu Phe Leu Lys
145 150 155 160

Val Pro Lys Ala Asn Arg Thr Arg Thr Lys Val Thr Ile Arg Leu Phe
165 170 175

Gln Gln Gln Lys His Pro Gln Gly Ser Leu Asp Thr Gly Glu Glu Ala
180 185 190

Glu Glu Val Gly Leu Lys Gly Glu Arg Ser Glu Leu Leu Ser Glu
195 200 205

Lys Val Val Asp Ala Arg Lys Ser Thr Trp His Val Phe Pro Val Ser
210 215 220

Ser Ser Ile Gln Arg Leu Leu Asp Gln Gly Lys Ser Ser Leu Asp Val
225 230 235 240

Arg Ile Ala Cys Glu Gln Cys Gln Glu Ser Gly Ala Ser Leu Val Leu
245 250 255

Leu Gly Lys Lys Lys Lys Glu Glu Gly Glu Gly Lys Lys Lys
260 265 270

Gly Gly Gly Glu Gly Gly Ala Asp Glu Glu Lys Glu Gln Ser
275 280 285

His Arg Pro Phe Leu Met Leu Gln Ala Arg Gln Ser Glu Asp His Pro
290 295 300

His Arg Arg Arg Arg Arg Gly Leu Glu Cys Asp Gly Lys Val Asn Ile
305 310 315 320

Cys Cys Lys Lys Gln Phe Phe Val Ser Phe Lys Asp Ile Gly Trp Asn
325 330 335

Asp Trp Ile Ile Ala Pro Ser Gly Tyr His Ala Asn Tyr Cys Glu Gly
340 345 350

Glu Cys Pro Ser His Ile Ala Gly Thr Ser Gly Ser Ser Leu Ser Phe
355 360 365

His Ser Thr Val Ile Asn His Tyr Arg Met Arg Gly His Ser Pro Phe
370 375 380

Ala Asn Leu Lys Ser Cys Cys Val Pro Thr Lys Leu Arg Pro Met Ser
385 390 395 400

Met Leu Tyr Tyr Asp Asp Gly Gln Asn Ile Ile Lys Lys Asp Ile Gln
405 410 415

Asn Met Ile Val Glu Glu Cys Gly Cys Ser
420 425

<210> 7
<211> 424
<212> PRT
<213> *Mus musculus*

<400> 7
Met Pro Leu Leu Trp Leu Arg Gly Phe Leu Leu Ala Ser Cys Trp Ile
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20 25 30

Pro Asp Cys Pro Ser Cys Ala Leu Ala Thr Leu Pro Lys Asp Gly Pro
35 40 45

Asn Ser Gln Pro Glu Met Val Glu Ala Val Lys Lys His Ile Leu Asn
50 55 60

Met Leu His Leu Lys Lys Arg Pro Asp Val Thr Gln Pro Val Pro Lys
65 70 75 80

Ala Ala Leu Leu Asn Ala Ile Arg Lys Leu His Val Gly Lys Val Gly
85 90 95

Glu Asn Gly Tyr Val Glu Ile Glu Asp Asp Ile Gly Arg Arg Ala Glu
100 105 110

Met Asn Glu Leu Met Glu Gln Thr Ser Glu Ile Ile Thr Phe Ala Glu
115 120 125

Ser Gly Thr Ala Arg Lys Thr Leu His Phe Glu Ile Ser Lys Glu Gly
130 135 140

Ser Asp Leu Ser Val Val Glu Arg Ala Glu Val Trp Leu Phe Leu Lys

145	150	155	160
Val Pro Lys Ala Asn Arg Thr Arg Thr Lys Val Thr Ile Arg Leu Phe			
165	170	175	
Gln Gln Gln Lys His Pro Gln Gly Ser Leu Asp Thr Gly Asp Glu Ala			
180	185	190	
Glu Glu Met Gly Leu Lys Gly Glu Arg Ser Glu Leu Leu Ser Glu			
195	200	205	
Lys Val Val Asp Ala Arg Lys Ser Thr Trp His Ile Phe Pro Val Ser			
210	215	220	
Ser Ser Ile Gln Arg Leu Leu Asp Gln Gly Lys Ser Ser Leu Asp Val			
225	230	235	240
Arg Ile Ala Cys Glu Gln Cys Gln Glu Ser Gly Ala Ser Leu Val Leu			
245	250	255	
Leu Gly Lys Lys Lys Lys Lys Glu Val Asp Gly Asp Gly Lys Lys Lys			
260	265	270	
Asp Gly Ser Asp Gly Gly Leu Glu Glu Glu Lys Glu Gln Ser His Arg			
275	280	285	
Pro Phe Leu Met Leu Gln Ala Arg Gln Ser Glu Asp His Pro His Arg			
290	295	300	
Arg Arg Arg Arg Gly Leu Glu Cys Asp Gly Lys Val Asn Ile Cys Cys			
305	310	315	320
Lys Lys Gln Phe Phe Val Ser Phe Lys Asp Ile Gly Trp Asn Asp Trp			
325	330	335	
Ile Ile Ala Pro Ser Gly Tyr His Ala Asn Tyr Cys Glu Gly Glu Cys			
340	345	350	
Pro Ser His Ile Ala Gly Thr Ser Gly Ser Ser Leu Ser Phe His Ser			
355	360	365	
Thr Val Ile Asn His Tyr Arg Met Arg Gly His Ser Pro Phe Ala Asn			
370	375	380	
Leu Lys Ser Cys Cys Val Pro Thr Lys Leu Arg Pro Met Ser Met Leu			
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Tyr Tyr Asp Asp Gly Gln Asn Ile Ile Lys Lys Asp Ile Gln Asn Met			
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Ile Val Glu Glu Cys Gly Cys Ser			
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<210> 8
<211> 424
<212> PRT

<213> Rattus norvegicus

<400> 8

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	20				25						30				
Pro	Asp	Cys	Pro	Ser	Cys	Ala	Leu	Ala	Thr	Leu	Pro	Lys	Asp	Gly	Pro
	35				40				45						
Asn	Ser	Gln	Pro	Glu	Met	Val	Glu	Ala	Val	Lys	Lys	His	Ile	Leu	Asn
	50			55			60								
Met	Leu	His	Leu	Lys	Lys	Arg	Pro	Asp	Val	Thr	Gln	Pro	Val	Pro	Lys
	65			70			75			80					
Ala	Ala	Leu	Leu	Asn	Ala	Ile	Arg	Lys	Leu	His	Val	Gly	Lys	Val	Gly
	85				90				95						
Glu	Asn	Gly	Tyr	Val	Glu	Ile	Glu	Asp	Asp	Ile	Gly	Arg	Arg	Ala	Glu
	100				105				110						
Met	Asn	Glu	Leu	Met	Glu	Gln	Thr	Ser	Glu	Ile	Ile	Thr	Phe	Ala	Glu
	115				120				125						
Ser	Gly	Thr	Ala	Arg	Lys	Thr	Leu	His	Phe	Glu	Ile	Ser	Lys	Glu	Gly
	130				135			140							
Ser	Asp	Leu	Ser	Val	Val	Glu	Arg	Ala	Glu	Val	Trp	Leu	Phe	Leu	Lys
	145				150			155			160				
Val	Pro	Lys	Ala	Asn	Arg	Thr	Arg	Thr	Lys	Val	Thr	Ile	Arg	Leu	Phe
	165					170				175					
Gln	Gln	Gln	Lys	His	Pro	Gln	Gly	Ser	Leu	Asp	Met	Gly	Asp	Glu	Ala
	180					185			190						
Glu	Glu	Met	Gly	Leu	Lys	Gly	Glu	Arg	Ser	Glu	Leu	Leu	Leu	Ser	Glu
	195				200			205							
Lys	Val	Val	Asp	Ala	Arg	Lys	Ser	Thr	Trp	His	Ile	Phe	Pro	Val	Ser
	210				215			220							
Ser	Ser	Ile	Gln	Arg	Leu	Leu	Asp	Gln	Gly	Lys	Ser	Ser	Leu	Asp	Val
	225				230			235			240				
Arg	Ile	Ala	Cys	Glu	Gln	Cys	Gln	Glu	Ser	Gly	Ala	Ser	Leu	Val	Leu
	245					250			255						
Leu	Gly	Lys	Lys	Lys	Lys	Glu	Val	Asp	Gly	Asp	Gly	Lys	Lys	Lys	
	260					265			270						
Asp	Gly	Ser	Asp	Gly	Gly	Leu	Glu	Glu	Lys	Glu	Gln	Ser	His	Arg	
	275				280			285							

Pro Phe Leu Met Leu Gln Ala Arg Gln Ser Glu Asp His Pro His Arg